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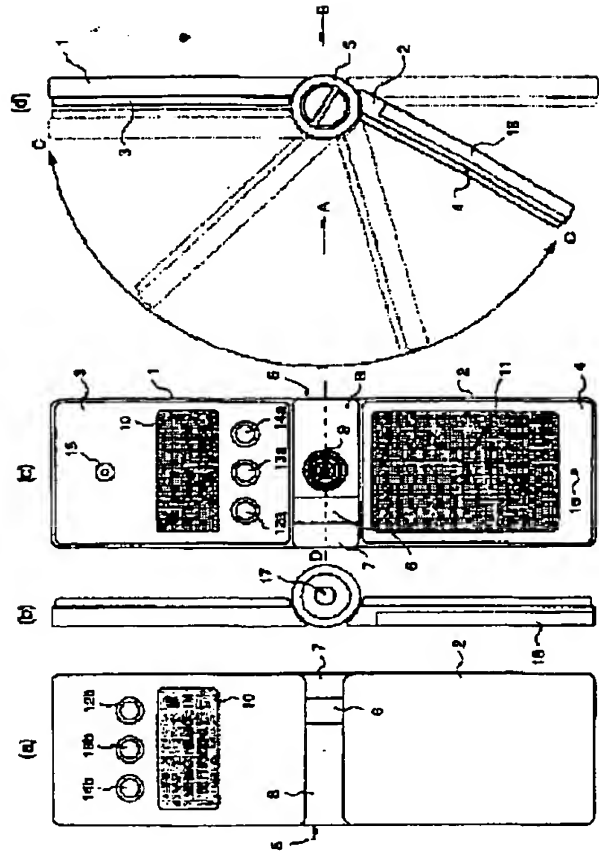
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TITLE : INFORMATION COMMUNICATION
TERMINAL EQUIPMENT



ABSTRACT : PROBLEM TO BE SOLVED: To make portability superior, and to handle a moving image with low power consumption, and to simplify treatment.

SOLUTION: Outer cases 1 and 2 are connected rotatably by a connecting part 5. A compact transparent see-through liquid crystal display part 10 is formed at one part of an inner case 3 of the outer case 1, and the opposite side can be viewed through the outer case 1 and the inner case 3 from the see-through crystal liquid display part 10. A color crystal liquid display part 11 is arranged over substantially the whole face of an inner case 4 of the outer case 2. When the outer cases 1 and 2 are closed, the whole part of the see-through liquid crystal display part 10 is overlapped with one part of the color liquid crystal display part 11, and information displayed on this can be viewed through the see-through liquid crystal display part 10. Also, a housing body 8 is formed rotatably at the connecting part 5 independently of the cases 1 and 2, and a video camera having a camera lens 9 is housed in this housing body 8.

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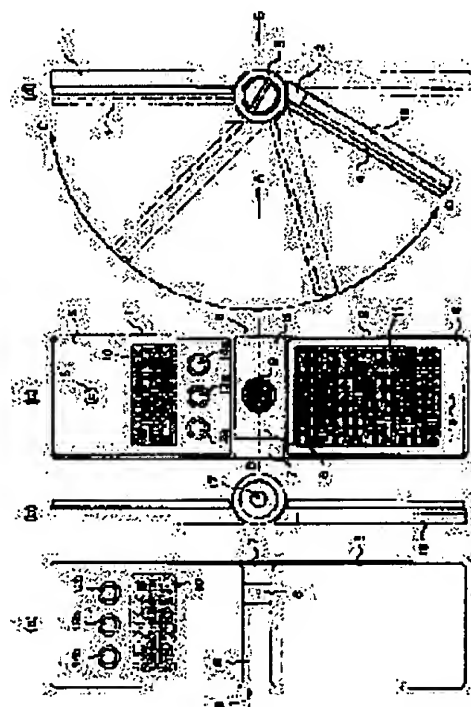
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(54) INFORMATION COMMUNICATION TERMINAL EQUIPMENT

(57)Abstract:

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SOLUTION: Outer cases 1 and 2 are connected rotatably by a connecting part 5. A compact transparent see-through liquid crystal display part 10 is formed at one part of an inner case 3 of the outer case 1, and the opposite side can be viewed through the outer case 1 and the inner case 3 from the see-through crystal liquid display part 10. A color crystal liquid display part 11 is arranged over substantially the whole face of an inner case 4 of the outer case 2. When the outer cases 1 and 2 are closed, the whole part of the see-through liquid crystal display part 10 is overlapped with one part of the color liquid crystal display part 11, and information displayed on this can be viewed through the see-through liquid crystal display part 10. Also, a housing body 8 is formed rotatably at the connecting part 5 independently of the cases 1 and 2, and a video camera having a camera lens 9 is housed in this housing body 8.



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CLAIMS

[Claim(s)]

[Claim 1] The 1st and 2nd case is attached in the same hinge region rotatable, and is connected with it. The see-through liquid crystal display section small in this 1st case in the condition to which a large-sized electrochromatic display display was prepared in this 2nd case, respectively, and an inside of this 1st and 2nd case was mutually joined of having closed So that this see-through whole liquid crystal display section can see this a part of electrochromatic display display through this a part of electrochromatic display display, and overlap and this see-through liquid crystal display section An information communication terminal characterized by setting up arrangement relation between this see-through liquid crystal display section in this 1st and 2nd case, and this electrochromatic display display.

[Claim 2] An information communication terminal characterized by establishing a sense modification means which has a video camera and enables modification of sense of this video camera in claim 1 in order.

[Claim 3] It is the information communication terminal which said video camera is attached in said hinge region in claim 2, and is characterized by said sense modification means being a means which makes sense of said camera independently pivotable [said 1st and 2nd case] around a medial axis of said hinge region.

[Claim 4] An information communication terminal characterized by making said see-through liquid crystal display section usable as a finder of a camera by establishing a means to latch between said 1st and 2nd case to a predetermined angle, in claims 2 or 3, and performing a scope display in said see-through liquid crystal display section.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention relates to the information communication terminal equipped with the video camera, and relates to the information communication terminal especially equipped with two or more functions convenient to carry.

[0002]

[Description of the Prior Art] As an information communication terminal as an object for the individuals of a pocket mold, the portable telephone in which the transmission-and-reception talk is possible is spreading quickly at a carrying place in recent years. This makes a telephone set small and a cellular phone carries out it as [conveniently], and as voice can be communicated by wireless among the other parties, it does not have the function which can transmit and receive image data like a TV phone system.

[0003] Moreover, there are some in which the personal digital assistant (PDA) is known and this has the transceiver function of image data as an information communication terminal of other pocket molds, and transmission and reception of image data are enabled. Moreover, a current personal digital assistant has a thing in use on condition of connecting with a portable telephone and using, and the transmission-and-reception talk is possible for it with a natural thing by carrying a personal digital assistant with a portable telephone.

[0004]

[Problem(s) to be Solved by the Invention] however, the problems with the above-mentioned conventional following personal digital assistant -- that is It is making to perform the data collection in a destination, processing, and transmission and reception into the key objective, and a video camera is provided like a TV phone system, and the output image of this video camera is transmitted and received, and it twists. As mentioned above Although you can make it able to cooperate with a portable telephone and pictorial communication and the function as a telephone set can also be given The present pocket communication terminal which cannot check the face of the other party who is having a dialog is bulky compared with a portable telephone, and since it is not the thing of pocketable size like a portable telephone In a configuration of connecting and using a personal digital assistant and a portable telephone inconvenient to carrying, since the personal digital assistant and the portable telephone had to be carried, there was a problem of being inconvenient to carrying, further.

[0005] Then, these people prepare the liquid crystal display section in each of the case used as the case after it is attached pivotable mutually that the connection section is also, in order to solve this problem. Image information and a touch panel are displayed on these liquid crystal display section. Moreover, the video camera was contained to these connection circles, and the information communication terminal into which it enabled it to change the sense of a video camera freely as pivotable [independently of these cases] in the video camera of a parenthesis was offered (Japanese Patent Application No. No. 226800 [nine to]).

[0006] However, since no less than two pieces use the large-sized liquid crystal display section, this information communication terminal becomes what has comparatively big power consumption. Since such equipment is using the battery as the power supply as portable, it is desirable that it can be made to make power consumption small as much as possible. Moreover, even if arrival of the mail is during carrying, in order to check it, the activity of seeing the contents which take out this terminal unit and are displayed in an aperture and the liquid crystal display section in a case is required, but it is still more convenient, if such an activity is not needed but it can check at a glance.

[0007] This invention is made in view of the above point, and the purpose is excellent in portability and is to offer the information communication terminal of the various functions nature whose implementation of simplicity was enabled with reduction of power consumption.

[0008]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the 1st and 2nd case is attached in the same hinge region rotatable, and this invention is connected. The see-through liquid crystal display section small in the 1st case in the condition to which a large-sized electrochromatic display display was prepared in the 2nd case, respectively, and an inside of the 1st and 2nd case was mutually joined of having closed So that the see-through whole liquid crystal display section can see a part of electrochromatic display display through a part of electrochromatic display display, and overlap and the see-through liquid crystal display section It considers as a configuration to which arrangement relation between the see-through liquid crystal display section in the 1st and 2nd case and this electrochromatic display display is set.

[0009] Even when it is in the condition which piled up the 1st and 2nd case of having closed, by this configuration, information which can see from the outside information displayed in the see-through liquid crystal display section, and is displayed by internal electrochromatic display display through this see-through liquid crystal display section can also be seen. Therefore, an activity of opening a case and checking display information is less necessary. Moreover, since small liquid crystal is used as the see-through liquid crystal display section, a display there does not take exceptionally big power.

[0010] Moreover, with the 1st and 2nd case of the above, this invention prepares a video camera pivotable independently in the above-mentioned connection section, and considers it as a configuration which can change sense of a video camera freely at it.

[0011]

[Embodiment of the Invention] Hereafter, the operation gestalt of this invention is explained using a drawing. Drawing 1 is the block diagram showing 1 operation gestalt of the information communication terminal by this invention, left lateral drawing and this drawing (c) are right lateral drawings, and, as for this drawing (a), the rear view of the thing and this drawing (a) where the front view of this drawing (c) saw this drawing (d) from arrow head A sees [drawing] this drawing (d) for front view and this drawing (d) from arrow head B, as for rear view and this drawing (b). In these drawings an outside case, and 3 and 4 1 and 2 Moreover, an inner case, In the connection section and 6, an axis-of-rotation supporter and 7 a receipt object and 9 for the axis of rotation and 8 A camera lens, [5] 10 -- for an actuation key and 15, as for a microphone and 17, a loudspeaker and 16 are [the see-through liquid crystal display section and 11 / an electrochromatic display display, and 12a, 12b, 13a, 13b, 14a and 14b / an electric power switch and 18] battery stowages.

[0012] This drawing (a) The hinge is constituted by the axis of rotation 7 prepared in the outside case 1, and the axis-of-rotation supporter 6 formed in the outside case 2, and the outside cases 1 and 2 close like a note, or it enables it to open in - (d), as an arrow head C shows in this drawing (d). Moreover, further, in the axis of rotation 7, the receipt object 8 is attached in the opposite side pivotable, and the circuit board in which the circuit which processes the output of a thin video camera or a video camera in this receipt object 8 was carried is contained, and a hole is prepared in that part, and the camera lens 9 is attached there at this axis-of-rotation supporter 6. Therefore, there are no components which project outside from the receipt object 8.

[0013] Moreover, the inner case 3 is attached in the outside case 1, and the inner case 4 is attached in the outside case 2, respectively. And the see-through liquid crystal display section 10 is inserted in opening of the small area which penetrates the outside [this] case 1 and the inner case 3 to the outside case 1 side, and the color display section 11 of a large area is attached in the case 4 in the outside case 2 side. Using [therefore] transparent liquid crystal, this see-through liquid crystal display section 10 will let this see-through liquid crystal section 10 pass, and its opposite side can be seen, respectively from the transverse-plane side which the back side shown by drawing 1 (a) to the opposite side shows by drawing 1 (c) again.

[0014] The actuation keys 12a, 13a, and 14a are formed in the surface of the inner case 3, for example, the see-through liquid crystal display section 10 bottom, and the actuation keys 12b, 13b, and 14b which have the same function as each of these are formed in the see-through liquid crystal display section 10 bottom of the surface of the outside case 1, as shown in drawing 1 (a). When it considers as the condition of having closed the outside cases 1 and 2, as this is because it can be made to perform the same actuation as the actuation keys 12a, 13a, and 14a and shows drawing 2 When it considers as the condition of having closed the outside cases 1 and 2 The actuation keys 12b, 13b, and 14b corresponding to the actuation keys 12a, 13a, and 14a will be arranged to the see-through display 10 by the same relation as the actuation keys 12a, 13a, and 14a to the see-through display 10 shown in drawing 1 (c).

[0015] In addition, the actuation keys 12a, 13a, and 14a are made to perform a functional display near each actuation key of the see-through display 10, in order to show the actuation function. Thereby, each [these] actuation key can be used as the actuation key of various uses.

[0016] Furthermore, as shown in drawing 1 (c), a loudspeaker 15 (or an earphone jack is sufficient) is formed in the upper part of the see-through liquid crystal display section 10 of the inner case 3, and the microphone 16 is formed in the lower part of the electrochromatic display display 11 of the inner case 4. Moreover, an electric power switch 17 is formed, the battery stowage 18 is established in the outside case 2, and the battery is contained by the axis of rotation 7.

[0017] In addition, although not illustrated, the antenna is also formed possible [telescopic motion] and the communication link with the exterior is possible by this antenna.

[0018] The electrochromatic display display 11 displays the static image and dynamic image which are stored in the memory prepared in the information and the image of an image pick-up screen etc. of the video camera contained by the connection section 5, or the inner case 4, or It is for displaying information, such as alphabetic characters, such as a text. Moreover, the see-through liquid crystal display section 10 It is for displaying the character string and mark showing the present condition of these terminal units -- whether the charge condition and this terminal unit of a battery are in the arrival-of-the-mail (reception) condition of e-mail -- and an easy text can also be displayed now.

[0019] The thing of a high definition is used and the color display image of high quality is made to be obtained as an electrochromatic display display 11 here. When carrying out image display by this electrochromatic display display 11, CPU built in the inner case 4 performs that display control using a frame memory etc., the contents of storage of this frame memory are displayed with liquid crystal, but even if it is the case of a display of an animation, or the display of a character string or a text, when changing the contents of a display, such as scrolling, whenever CPU changes the contents of a display, it performs actuation which rewrites the contents of storage of this frame memory. Power consumption becomes large when rewriting by this frame memory performs the display from which very big power is required since this frame memory is a mass thing, and the contents of the animation etc. change by the electrochromatic display display 11. This is not a desirable thing when using a battery as a power supply.

[0020] In order to solve such a problem, in this operation gestalt, it is cheap, the see-through liquid crystal display section 10 of a low power is formed, and the present condition, a short paddle text, etc. of a terminal unit are displayed in this see-through liquid crystal display section 10. If the character string or mark which shows the condition of a battery to the see-through liquid crystal display section 10 will be displayed if a terminal unit is here made into a power supply ON state, for example by carrying out ON actuation of the electric power switch 17, and there is arrival of the mail, the information which shows it shall be replaced with and displayed on the information which shows the condition of a battery.

[0021] There can also be little amount of information which it is small and is displayed, and can display an alphabetic character etc. in black Isshiki, and this see-through liquid crystal display section 10 can also make memory used for this display the thing of small capacity, and there is also very little power consumption and it ends. Moreover, even if the screen product is small, and ends, the information showing the present condition of a terminal unit has "arrival of the mail" frequently, it rewrites the information showing it by memory frequently and it makes it display in the see-through liquid crystal display section 10, the power consumption for it is not exceptionally big. Moreover, even if it makes it the information showing the condition of a battery, when the residual charge voltage of a battery becomes low unusually, the contents of information only change, and still picture information of almost is carried out, and it is displayed. For this reason, the power for the display of this see-through liquid crystal display 10 becomes a still smaller thing.

[0022] Although the axis of rotation 7 is attached pivotable to the axis-of-rotation directions section 6 The receipt object 8 is attached pivotable focusing on that medial axis D to this axis of rotation 7. This receipt object 8 furthermore, by a fingertip etc. [for example,] By making it rotate to this axis of rotation 7, the sense (sense of the camera lens 9) of the video camera contained by this receipt object 8 is changeable over 360 degrees the surroundings of the medial axis D of the axis of rotation 7.

[0023] Drawing 2 is drawing showing the condition of having closed the cases 1 and 2 of this operation gestalt.

[0024] Thus, in the condition of having closed, as for the see-through liquid crystal display section 10, the whole laps with a part of electrochromatic display display 11 (drawing 1 (c)). Thus, the see-through liquid crystal display section 10 is positioned and formed in the outside case 1 side. Therefore, a part of internal electrochromatic display display 11 can be seen through the see-through liquid crystal display section 10.

[0025] Thus, although the information (for example, a number, the easy contents of e-mail, etc. of delivery origin) which tells the see-through liquid crystal display section 10 about the arrival is displayed as mentioned above when receiving e-mail, where cases 1 and 2 are closed This image can be displayed by the internal electrochromatic display display 11 (drawing 1 (c)) so that it may be visible through the see-through liquid crystal display section 10 with this, when an image is sent.

[0026] It is more desirable for drawing 2 (a) to display the easy contents of e-mail "Taro's Birthday" in the see-through liquid crystal display section 10, to display the image of a photograph by the electrochromatic display display 11, and to

have made it such an image not lap with the contents of e-mail expressed in written form. Moreover, drawing 2 (b) displays the easy contents of e-mail "Msg from Taro pm20:10" in the see-through liquid crystal display section 10, and displays the mark of e-mail by the electrochromatic display display 11, and even if it laps with the contents of e-mail, recognition of an image is easy for it in the case of such an image.

[0027] Thus, also where cases 1 and 2 are closed, the sense of the video camera contained by this, therefore the camera lens 9 is freely changeable by carrying out rotation actuation of the receipt object 8 by a fingertip etc.

[0028] In addition, when cases 1 and 2 are open so that clearly from drawing 1 (a) if it shall see from the direction shown in drawing 2 when seeing the display information on the see-through liquid crystal display 10, where cases 1 and 2 are closed, the sense of the display information on the see-through liquid crystal display section 10 seen from the outside of the outside case 1 is what carried out vertical reversal. Therefore, when it changes into the condition of having closed from the condition of having opened cases 1 and 2, it is made to carry out vertical reversal of the sense of the display information on the see-through liquid crystal display section 10 automatically.

[0029] This operation gestalt can be changed into use gestalten other than the above use gestalten (function), such as a camera, and a cellular phone, a smart phone. The modification means of this use gestalt are the actuation keys 14a and 14b in drawing 1, and these function as a menu screen key.

[0030] With this operation gestalt, ON of an electric power switch 17 shall set up the use gestalt as a cellular phone automatically as one mode. Drawing 3 (a) shows the telephone dispatch mode of the use gestalt as this cellular phone, and attaches the same sign to the portion corresponding to a forward release-of-drawing side.

[0031] In drawing 3 (a), the control unit of telephone sets, such as a ten key, is displayed on the electrochromatic display display 11 as a touch key in this mode. If the sequential touch of these ten keys is carried out and the other party's telephone number is inputted, in the see-through liquid crystal display section 10, a name "patent TAROU", the other party's present time of day, duration of a call over the telephone number "090123456789" and the inputted telephone number of the other party who inputted, etc. are displayed, and input can be checked. Here, a touch of "dispatch" key which it is checked that the telephone number has been inputted correctly and displayed by the electrochromatic display display 11 performs the call of the other party.

[0032] In addition, actuation key 12a functions also as a call key, and when calling the already registered telephone number, it is used.

[0033] Here, actuation key 13a functions as a mode key, and can choose "TV phone mode" and "it being usually telephone mode" for the actuation of every. Although it shifts to the TV phone mode which there is a response from the other party, and is automatically shown in drawing 3 (b) the back when the other party is a TV phone, when the other party is not a TV phone, the mode shown in drawing 3 (a) is held, and a message becomes possible. This message is performed through a microphone 16 and a loudspeaker 15. A message will be closed if "termination" key displayed by the electrochromatic display display 11 is touched.

[0034] Moreover, when mode key 13a is operated and it shifts to TV phone mode, as shown in drawing 3 (b), the other party's image is displayed on the electrochromatic display display 11. Moreover, the photography image of a video camera is also displayed, and while its own image is displayed on this electrochromatic display display 11 by turning this video camera, therefore the camera lens 9 to one's direction, it is sent also to the other party.

[0035] In the condition in this TV phone mode, a touch of the touch key of "termination" displayed on the electrochromatic display display 11 terminates return and a message in the telephone dispatch mode shown in drawing 3 (a). Moreover, "it is image display of "other party + oneself drawing for the touch of every to touch touch key of display change"" -> "image display of the other party" -> "image display by the side of oneself" -> "image display of other party + oneself drawing" -> displayed on the electrochromatic display display 11 A display changes in order. In addition, the display of the see-through liquid crystal display section 10 in this TV phone mode is the same as that of the case in the telephone dispatch mode shown in drawing 3 (a).

[0036] In addition, when there is arrival by the side of the other party in the state of the telephone dispatch shown in drawing 3 (a), the display explained by drawing 1 and drawing 2 will be performed.

[0037] Here, actuation key 14a functions as a menu screen key, and is "camera" -> "smart phone" -> "telephone dispatch" -> "camera" -> for every actuation.... A use gestalt shifts in order.

[0038] If menu screen key 14a is operated in the telephone dispatch mode of the cellular phone shown in drawing 3 (a), it will shift to the use gestalt as a camera. In addition, during a message, even if shift of a use gestalt operates menu screen key 14a in the TV phone mode which shall not be done, therefore is shown in drawing 3 (b), TV phone mode continues it as it is.

[0039] Drawing 4 is drawing showing the operation at the time of using a use gestalt as a camera, 19 is a hand, 20 is a photographic subject, and the same sign is attached to the portion corresponding to drawing 1.

[0040] In this drawing, in the case of this use gestalt, where the outside cases 1 and 2 are opened at a predetermined angle, it has by one hand 19, and the video camera (not shown) prepared in the connection section 5 is turned to a photographic subject, and is picturized. In this case, information is not displayed on the see-through liquid crystal display section 10, but a photographic subject 20 can be seen through this transparent see-through liquid crystal display section 10. The photographic subject image picturized with a video camera is displayed on the electrochromatic display display 11.

[0041] Drawing 5 is drawing showing each mode in case a use gestalt is a "camera."

[0042] Drawing 5 (a) shows the photography mode used as drawing 4 showed. In this case, the see-through liquid crystal display section 10 can be operated as a finder of a camera, and can make the scope display 21 which expresses the standard of an image pick-up range there perform.

[0043] When this photography mode is set up, form a ratchet mechanism 22 in the connection section 5, and it is made for these cases 1 and 2 to be latched at a predetermined angle, for example, the condition of being 160 degrees, and is made to picturize in this condition, as shown in drawing 6 (a). Moreover, as are shown in drawing 6 (a) and the range whose photographic subject side can be seen through the see-through liquid crystal display section 10 is shown in the upper and lower sides, for example, the range of 15 degrees, and drawing 6 (b) to the horizontal plane passing through the center of the see-through liquid crystal display section 10 So that it may disappear, even if it carries out to right and left, for example, the range of 15 degrees, to the vertical plane passing through the center of the see-through liquid crystal display section 10, an eye 23 separates from this range and it sees a photographic subject side from the see-through liquid crystal display section 10 The filter (for example, an electron filter and a sheet type filter) which carries out a visual field limit can be prepared in the surface of the see-through liquid crystal display section 10. thus, by carrying out a visual field limit, the condition of seeing a photographic subject 20 side always serves as about 1 law from the see-through liquid crystal display section 10, and the range where the see-through liquid crystal display section 10 functions as a finder, and is desired from the display image and the see-through liquid crystal display section 10 of the electrochromatic display display 11 will be mostly in agreement.

[0044] In drawing 5 (a), actuation key 12a in this case functions as a record key. If this record key 12a is operated, the image pick-up frame at this time will be memorized by memory. Therefore, whenever it operates record key 12a, the image of one frame is memorized by memory one by one. A mass thing is required for the memory in this case. Then, it connects by a server and wireless equipped with mass memory, and the image of one frame at that time is transmitted to a server, and this operation gestalt can be memorized to the predetermined address of memory, if record key 12a is operated. In this case, the number of this image, the date information on record, etc. are memorized by coincidence with this image (in drawing 5 (a), this image number is displayed on the electrochromatic display display 11 like "No.0005").

[0045] Actuation key 13a functions as a mode key which changes the mode of a camera, and is a check / "search mode" -> "setting mode" -> "photography mode" -> "check/search mode" -> for every actuation.... The mode shifts in order. If this mode key 13a is operated in the image pick-up mode shown in drawing 5 (a), it will shift to the check/search mode shown in drawing 5 (b). This check/search mode are for checking or searching the image recorded as mentioned above, and if it switches from drawing 5 (a), the list display (thumbnail list display) of the image memorized until now will be first performed so that it may illustrate. in this case, the touch key of "***" as which the image to specify is displayed by half tone dot meshing etc., and is displayed on coincidence -- "-- An assignment image can be changed by touching the touch key which is ". moreover, the touch key of "***" which starts when all images cannot be displayed by this list display -- "-- A list display can be scrolled by continuing touching the touch key which is " and forcing a half-tone-dot-meshing portion on the upper limit section or the lower limit section of a list display.

[0046] In addition, in the see-through liquid crystal display section 10, information specified at this time, such as a number of an image and a record date, is displayed. Moreover, in this mode, actuation key 12a is functioning as a display change key.

[0047] As mentioned above, if a desired image is specified and this display change key 12a is operated by half tone dot meshing, only the above-mentioned assignment image in the list currently displayed by the electrochromatic display display 11 will be displayed on the whole field to which this list display was made. If display change key 12a is operated by this image display, it will change to the list display of the origin to illustrate. Moreover, actuation of the touch key of "deletion" displayed on the electrochromatic display display 11 by this list display eliminates the assignment image in a list display. Therefore, the storage image which became unnecessary can be removed.

[0048] Thus, although check of a storage image and retrieval of a request image can be performed, if mode key 13a is operated by this check/search mode, it will shift to the setting mode shown in drawing 5 (c). while this setting mode is for setting up the photography conditions of a camera etc., those setups are displayed on the electrochromatic display

display 11 by list and the selected conditions are expressed with half tone dot meshing -- the case of a check/search mode -- the same -- the touch key of "***" -- "-- Modification of a selection condition and scrolling of a list display can be performed using the touch key which is ".

[0049] Moreover, in the see-through liquid crystal display section 10, the additional information over the selected contents of setups and selected it is displayed. In the state of illustration, image quality is set up with a "standard" and the additional information which expresses the number of images memorizable in memory with this "15 more sheets can be photographed" is displayed.

[0050] If mode key 13a is operated in this setting mode, it will shift to the photography mode shown in drawing 5 (a). Therefore, before picturizing, it considers as the setting mode shown in drawing 5 (c) by operating mode key 13a. By considering as the photography mode shown in drawing 5 (a) by operating mode key 13a, after setting up the photography conditions here predetermined Memorizable image number of sheets can also be checked by considering as the setting mode which can photo on desired photography conditions and is shown in drawing 5 (c). further -- again -- a check/search mode -- setting up -- the touch key of "***" -- "-- By using the touch key and the touch key of "deletion" which are ", the edit after being able to delete an unnecessary storage image and memorizing an image is also possible.

[0051] If menu screen key 14a is operated with the use gestalt of the camera shown in drawing 5 , it will shift to the use gestalt of the smart phone shown in drawing 7 and drawing 8 . At this time, it shifts to the e-mail creation mode shown in drawing 7 (a) first. In this e-mail creation mode, the control unit for becoming [the electrochromatic display display 11]-from touch keys, such as letter key, mail creation is displayed, and the contents of e-mail can be created by carrying out touch actuation of the letter key. Selection of kana, an English number, a mark, etc., etc. can also be performed on the occasion of this creation. These contents of e-mail created are displayed in the see-through liquid crystal display section 10, and can check those contents by this.

[0052] Here, actuation key 12a will be memorized by memory by operating this memory key 12a, if a function and the desired contents of e-mail are completed as a memory key. Moreover, these contents of e-mail are also memorizable to the memory area specified as this terminal unit of a server. This memory area is accessible at other terminal units, and can send this mail to the operator of other terminal units by this.

[0053] If mode key 13a is operated in the e-mail creation mode shown in drawing 7 (a), it will shift to the e-mail receive mode shown in drawing 7 (b). This reads the mail stored in the memory area specified as this terminal unit of a server as mentioned above by other terminal units, and while this reading is performed by voice through a loudspeaker 15, the contents of that mail are displayed on the electrochromatic display display 11. this mail reads out and it is displayed on the electrochromatic display display 11 in inside -- "-- Using the touch key of the adjustment which reads out using the touch key and the touch key of "***" which are ", and lowers or raises speed, "the sideways trigonum mark / vertical bar mark of two" and "two right sense trigonum marks", and "two leftward trigonum marks", reading raising can be suspended, or it can read out, and a location can be returned or postponed.

[0054] Termination of all reading raising of the reception mail memorized by the server repeats reading raising of the again same mail. Moreover, if mode key 13a is operated by this e-mail receive mode, it will shift to the schedule pipe ** mode shown in drawing 7 (c). The contents of the schedule which this mode creates a self schedule and was created are displayed on the electrochromatic display display 11. In this case, actuation key 12a can add a new schedule by carrying out touch actuation of the "new" touch key which can update a part of schedule already created by functioning as an updating key and operating this updating key 12a, and is displayed on the electrochromatic display display 11. Thus, the schedule updated and the schedule of a new addition are sent to the memory area specified to this terminal unit of a server, and can tell the operator of an accessible terminal unit about this memory area.

[0055] If mode key 13a is operated in this schedule pipe ** mode, it will shift to the information acquisition mode shown in drawing 8 (a) and (b). If this mode enables it to acquire the information on desired through the Internet etc. and shifts to this mode from the service company which has joined, for example, as shown in drawing 8 (a), the list display of an information genre will be first made by the electrochromatic display display 11. In this list display, the information chosen is displayed by half tone dot meshing, and selection of the information on desired and scrolling of a list display which were explained by drawing 5 (b) can be performed by operating the touch key of scrolling displayed by the electrochromatic display display 11.

[0056] Here, actuation key 12a can choose a service company by operating access place key 12a, although the service company name of this traffic information will be displayed on the see-through liquid crystal display section 10 if the term of "traffic information [2.]" is chosen so that it may function as an access key, for example, may illustrate. Here, by touching "dispatch" key displayed by the electrochromatic display display 11, a service company can be accessed, and thereby, as shown in drawing 8 (b), the traffic information which this service company that accessed offers is displayed by the electrochromatic display display 11.

[0057] If mode key 13a is operated in the information acquisition mode shown in drawing 8 (a) and (b), it will shift to the navigation mode shown in drawing 8 (c). This mode receives offer of navigation information from GPS etc., and displays a navigation screen on the electrochromatic display display 11. The navigation information according to classes, such as in this case, "recommendation", "nearness", and "NEW", can be chosen. Moreover, in the see-through liquid crystal display section 10, information, such as a duration to the store according to the above-mentioned class and facility on the map displayed by the azimuth compass which shows bearing in the current position, or the electrochromatic display display 11, is displayed.

[0058] If menu screen key 14a is operated in each mode shown in drawing 8, it will return to the telephone dispatch mode of the cellular phone shown in drawing 3 (a).

[0059] As mentioned above, although the operation gestalt of this invention was explained, you may enable it to take the above use gestalt and other use gestalten, and neither the class and setting sequence in the mode by actuation of mode key 13a, nor the class and setting sequence of a use gestalt by actuation of menu screen key 14a are limited only in above sequence.

[0060] Moreover, although the video camera was prepared in the connection section 5 of the outside cases 1 and 2, it does not restrict to this and you may make it establish the edge of the opposite side etc. in other locations in drawing 1 with said operation gestalt in the connection section 5 by the side of the outside case 1. However, it cannot be overemphasized that the sense of a video camera is changed over sufficient angle range even in this case, and it enables it to close the outside cases 1 and 2.

[0061]

[Effect of the Invention] As explained above, according to this invention, the large-sized power consumption which can display image information prepares a large electrochromatic display display in one case side, but Since small power consumption has prepared the small see-through liquid crystal display section in the case side of another side The information which can be displayed in this see-through liquid crystal display section is displayed in this see-through liquid crystal display section. When it considers as the condition of having not used an electrochromatic display display, and could aim at reduction of power consumption, and having closed these cases in piles Since an internal electrochromatic display display can be seen through the see-through liquid crystal display section, also where a case is closed, the information displayed at an electrochromatic display display can be seen not to mention the information displayed on the see-through liquid crystal display section.

[0062] Moreover, since it has the video camera into which the sense is freely changeable according to this invention, irrespective of whether it is in the condition that the above-mentioned case opened, or it is in the condition of having closed, the photographic subject of the direction of arbitration can be photoed with a camera, and the above-mentioned see-through liquid crystal display section can be used as a finder of video in the case of this photography, and the user-friendliness for photography improves.

[Translation done.]

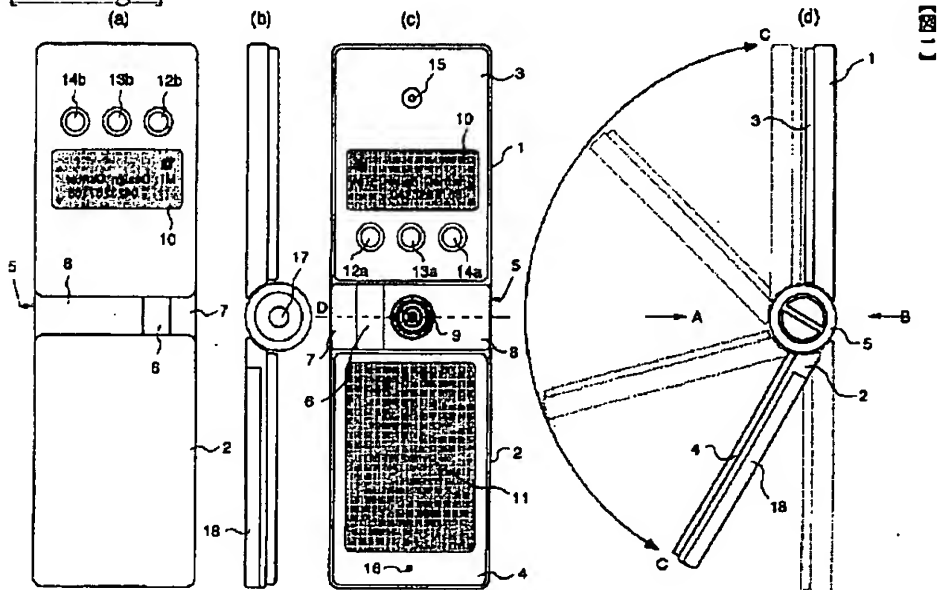
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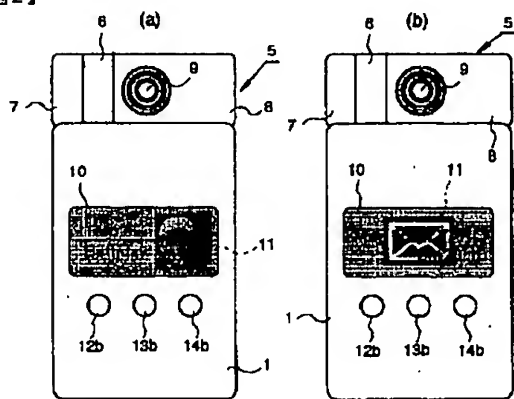
DRAWINGS

[Drawing 1]



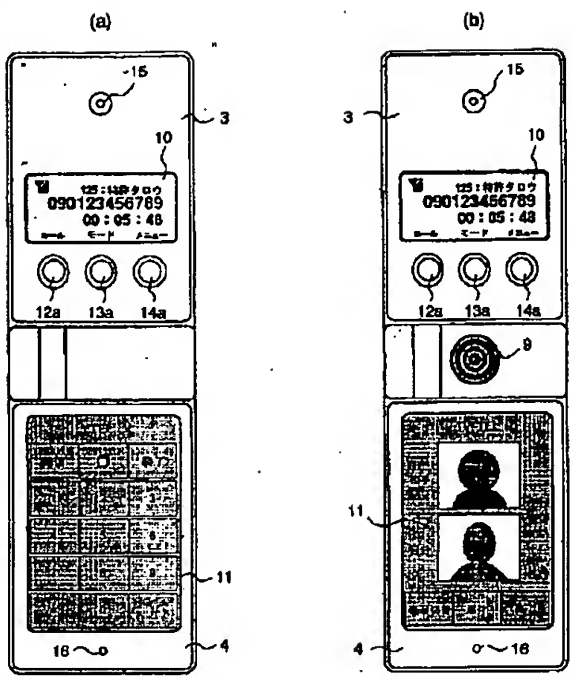
[Drawing 2]

[Fig. 2]

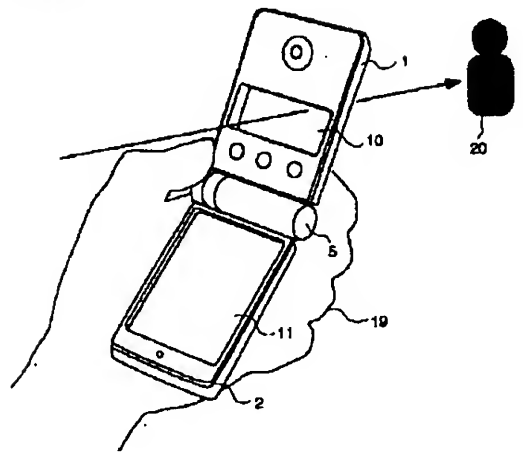


[Drawing 3]

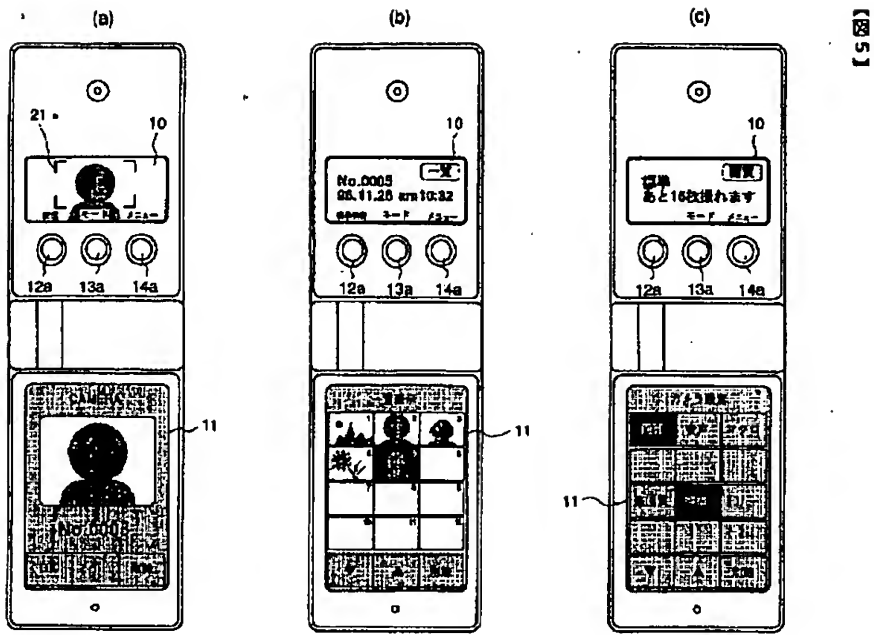
【図3】



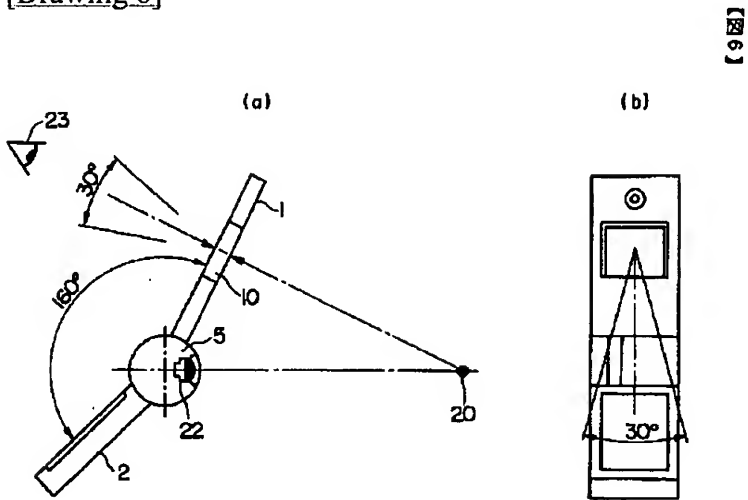
[Drawing 4]
【図4】



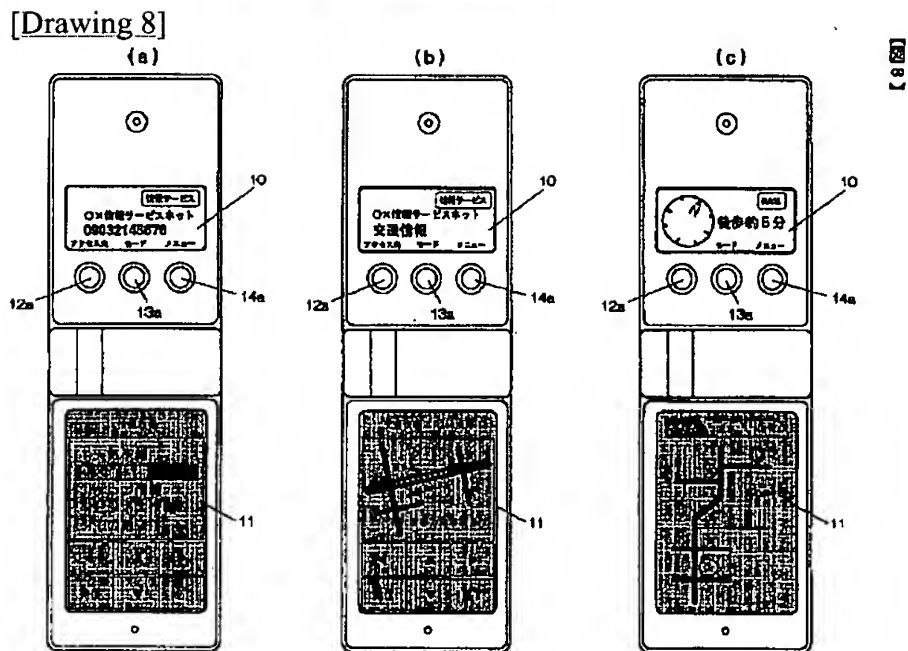
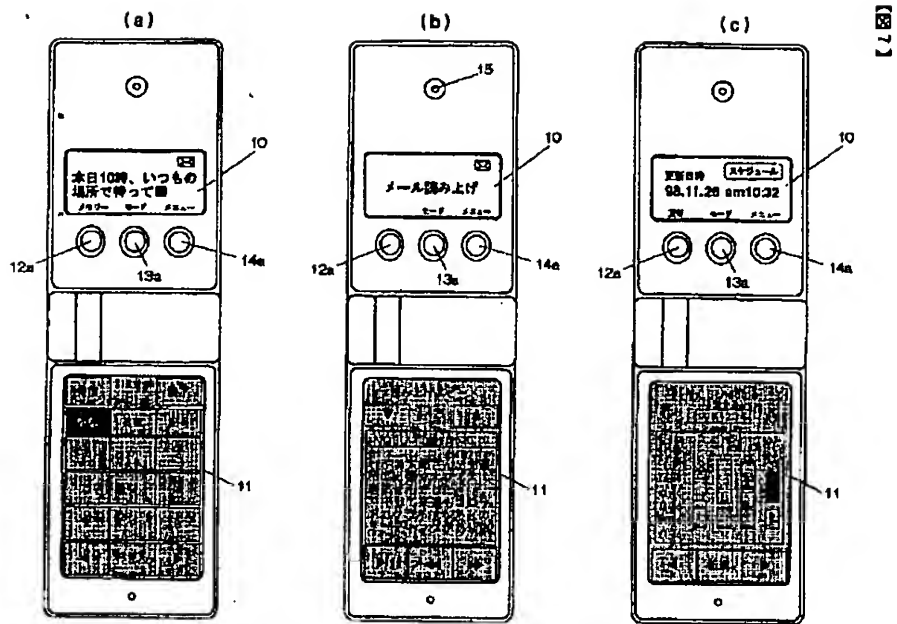
[Drawing 5]



[Drawing 6]



[Drawing 7]



[Translation done.]

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CORRECTION OR AMENDMENT

[Official Gazette Type] Printing of amendment by the convention of 2 of Article 17 of patent law

[Section partition] The 3rd partition of the 7th section

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H04M 11/00 302

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C

G09G 3/20 680 T

H04M 11/00 302

H04N 5/225 F

G06F 1/00 312 F

[Procedure revision]

[Filing Date] March 14, Heisei 15 (2003. 3.14)

[Procedure amendment 1]

[Document to be Amended] Specification

[Item(s) to be Amended] Claim

[Method of Amendment] Modification

[Proposed Amendment]

[Claim(s)]

[Claim 1] In an information communication terminal equipped with the connection section which connects the 2nd case equipped with the 1st case equipped with an inner case and an outside case, and an inner case and an outside case, and this 1st case and this 2nd case, and is connected possible [folding] so that this mutual inner case may be concealed, This inner case is equipped with the 1st display and the 1st switch group,

A case outside this is equipped with the 2nd display and the 2nd switch group,

this -- the 2nd switch group -- this -- an information communication terminal characterized by setting up the same function as the 1st switch group, and being prepared near this 2nd display.

[Claim 2] In an information communication terminal equipped with the connection section which connects the 2nd case equipped with the 1st case equipped with an inner case and an outside case, and an inner case and an outside case, and this 1st case and this 2nd case, and is connected possible [folding] so that this mutual inner case may be concealed,

This 1st case and this 2nd case contain a communication device in this case while arranging a loudspeaker and a microphone to a this connection section and edge side which counters, respectively,

This inner case is equipped with the 1st display and the 1st switch group,

A case outside this is equipped with the 2nd display and the 2nd switch group,

this -- the 2nd switch group -- this -- an information communication terminal characterized by setting up the same function as the 1st switch group, and being prepared near this 2nd display.

[Claim 3] In an information communication terminal equipped with the connection section which connects the 2nd case equipped with the 1st case equipped with an inner case and an outside case, and an inner case and an outside case, and this 1st case and this 2nd case, and is connected possible [folding] so that this mutual inner case may be concealed,

This 1st case and this 2nd case contain a communication device in this case while arranging a loudspeaker and a microphone to a this connection section and edge side which counters, respectively,

This connection section is equipped with a pivotable video camera to the axis of rotation of this connection section,

This inner case is equipped with the 1st display and the 1st switch group, and a case outside this is equipped with the 2nd display and the 2nd switch group,

this -- the 2nd switch group -- this -- an information communication terminal characterized by setting up the same function as the 1st switch group, and being prepared near this 2nd display.

[Claim 4] In an information communication terminal of any one publication of claim 1-3,

Said 2nd switch group is an information communication terminal characterized by having a call carbon button which calls the registered telephone number.

[Claim 5] In an information communication terminal of any one publication of claim 1-3,

Said 2nd switch group is an information communication terminal characterized by having a mode change carbon button.

[Claim 6] In an information communication terminal of any one publication of claim 1-3,

Said 2nd switch group is an information communication terminal characterized by having a change carbon button of a menu display.

[Claim 7] In an information communication terminal of any one publication of claim 1-3,

Said 2nd switch group is an information communication terminal characterized by setting up a different function corresponding to the mode set up.

[Claim 8] In an information communication terminal of any one publication of claim 1-3,

Said 2nd display is an information communication terminal characterized by displaying existence of a charge condition of a battery, or an arrival-of-the-mail condition of e-mail.

[Claim 9] In an information communication terminal according to claim 3,

Said 2nd switch group is an information communication terminal characterized by setting up a function which records an image photoed with a video camera.

[Claim 10] In an information communication terminal according to claim 3,

Said 1st display displays a static image and a dynamic image which are stored in information on an image pick-up screen of a video camera contained by said connection section, or memory in a case,

Said 2nd display is an information communication terminal characterized by displaying existence of a charge condition of a battery, or an arrival-of-the-mail condition of e-mail.

[Procedure amendment 2]

[Document to be Amended] Specification

[Item(s) to be Amended] 0007

[Method of Amendment] Modification

[Proposed Amendment]

[0007] The purpose of this invention is to offer the information communication terminal equipped with two or more functions convenient to carry.

[Procedure amendment 3]

[Document to be Amended] Specification

[Item(s) to be Amended] 0008

[Method of Amendment] Modification

[Proposed Amendment]

[0008]

[Means for Solving the Problem] The 1st case with which this invention was equipped with an inner case and an outside case in order to attain the above-mentioned purpose, In an information communication terminal equipped with the

connection section which connects the 2nd case equipped with an inner case and an outside case, and the 1st case and 2nd case, and is connected possible [folding] so that a mutual inner case may be concealed An inner case is equipped with the 1st display and the 1st switch group, an outside case is equipped with the 2nd display and the 2nd switch group, and the 2nd switch group is set as the same function as the 1st switch group, and is prepared near the 2nd display.

[Procedure amendment 4]

[Document to be Amended] Specification

[Item(s) to be Amended] 0009

[Method of Amendment] Deletion

[Procedure amendment 5]

[Document to be Amended] Specification

[Item(s) to be Amended] 0010

[Method of Amendment] Deletion

[Procedure amendment 6]

[Document to be Amended] Specification

[Item(s) to be Amended] 0061

[Method of Amendment] Modification

[Proposed Amendment]

[0061]

[Effect of the Invention] As explained above, according to this invention, the information communication terminal equipped with two or more functions convenient to carry can be offered.

[Procedure amendment 7]

[Document to be Amended] Specification

[Item(s) to be Amended] 0062

[Method of Amendment] Deletion

[Translation done.]